

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Sergio BELLI et al.)
Serial No.: Not yet assigned) Group Art Unit: Not yet assigned
Filed: January 29, 2002) Examiner: Not yet assigned
For: ELECTRICAL CABLE WITH SELF-)
REPAIRING PROTECTION)

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Prior to the examination of the above-captioned application, please amend this
application as follows:

IN THE SPECIFICATION:

Please amend the specification, as follows:

Add two section headings, a section subheading, and a paragraph immediately after the
title ELECTRICAL CABLE WITH SELF-REPAIRING PROTECTION, as follows:

--CROSS-REFERENCE TO RELATED APPLICATIONS

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This application is a continuation of U.S. Patent Application Serial No. 09/971,766, filed October 9, 2001, which is a continuation of U.S. Patent Application Serial No. 09/261,505, filed March 3, 1999, the contents of both of which are relied upon and incorporated herein by reference; additionally, Applicants claim the right of priority under 35 U.S.C. § 119(a) - (d) based on patent application No. 98103767.4, filed March 4, 1998, in the European Patent Office; further, Applicants claim the benefit under 35 U.S.C. § 119(e) based on prior-filed, copending provisional application No. 60/076,752, filed March 4, 1998, in the U.S. Patent and Trademark Office.

BACKGROUND OF THE INVENTION

Field of the Invention--

Page 1, line 10, add section subheading --Description of the Related Art-- prior to the start of the paragraph beginning "Electrical cables, in particular"

Page 3, line 13, add section heading --SUMMARY OF THE INVENTION-- prior to the start of the paragraph beginning "The Applicant has now found that"

On page 3, lines 13-33, amend the paragraph beginning "The Applicant has now found that", as follows:

The Applicant has now found that, in consequence of a mechanical damage which creates a discontinuity in at least one of the cable coating layers, it is possible to obtain effective self-

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repairing of the coating by virtue of the presence of an inner layer, placed, for example, between the insulating layer and the outer sheath. This inner layer comprises a material having a predetermined cohesiveness and, at the same time, a controlled flowability, which is capable of repairing the damage by restoring the continuity of the coating layer. After creation of a discontinuity in the coating, the material "moves" towards the point of damage and fills up, at least partly, the discontinuity by forming a substantially continuous layer which is capable of maintaining the functionality of the cable under the expected working conditions. The action of the self-repairing material, which occurs with a reversible mechanism, prevents, among other things, moisture infiltration and establishment of leakage currents, and thus a quick corrosion of the conductor.

Page 16, line 18, add section heading --BRIEF DESCRIPTION OF THE DRAWINGS-- prior to the start of the paragraph beginning "Figure 1 shows schematically"

Page 16, line 35, add section heading --DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS-- prior to the start of the paragraph beginning "The conductor (1) generally consists of metal wires"

IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claims 2-54.

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IN THE DRAWINGS:

Subject to the approval of the Examiner, please amend the drawings as requested in the Request for Approval of Drawing Change filed herewith.

REMARKS

Applicants submit this Preliminary Amendment together with a patent application under 37 C.F.R. § 1.53(b).

In this Preliminary Amendment, Applicants add section headings and section subheadings to conform to U.S. practice. Applicants also add claims to the right of priority and benefit. Additionally, Applicants amend the paragraph on page 3, at lines 13-33, to improve clarity, and cancel, without prejudice or disclaimer, claims 2-54. Further, Applicants submit a Request for Approval of Drawing Change to incorporate drawing symbols from MPEP 608.02. The originally-filed specification, claims, abstract, and drawings fully support the amendments to the specification and the Request for Approval of Drawings Change. No new matter was introduced.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.



By: _____

Lawrence F. Galvin
Reg. No. 44,694

Dated: January 29, 2002

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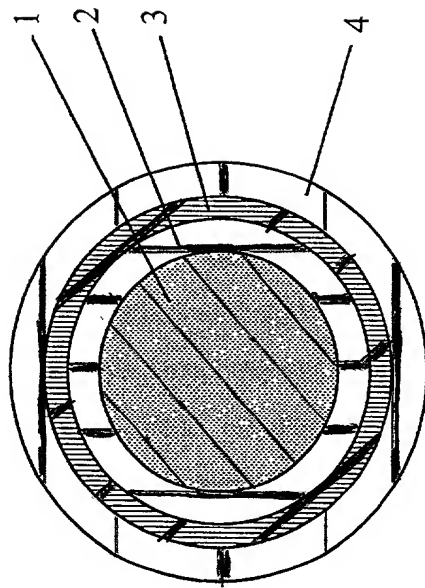
APPENDIX TO PRELIMINARY AMENDMENT DATED JANUARY 29, 2002

Amendments to the Specification

On page 3, lines 13-33, please amend the paragraph beginning "The Applicant has now found that . . .", as follows:

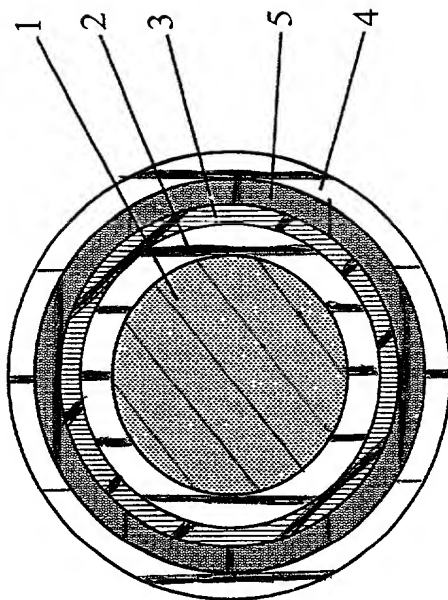
The Applicant has now found that, in consequence of a mechanical damage which creates a discontinuity in at least one of the cable coating layers, it is possible to obtain effective self-repairing of the coating by virtue of the presence of an inner layer, placed, for example, between the insulating layer and the outer [sheath, this] sheath. This inner layer [comprising] comprises [of] a material having a predetermined cohesiveness and, at the same time, a controlled flowability, which is capable of repairing the damage by restoring the continuity of the coating layer. After creation of a discontinuity in the coating, the material "moves" towards the point of damage and fills up, at least partly, the discontinuity by forming a substantially continuous layer which is capable of maintaining the functionality of the cable under the expected working conditions. The action of the self-repairing material, which occurs with a [revesible] reversible mechanism, prevents, among other things, moisture infiltration and establishment of leakage currents, and thus a quick corrosion of the conductor.

Fig. 1



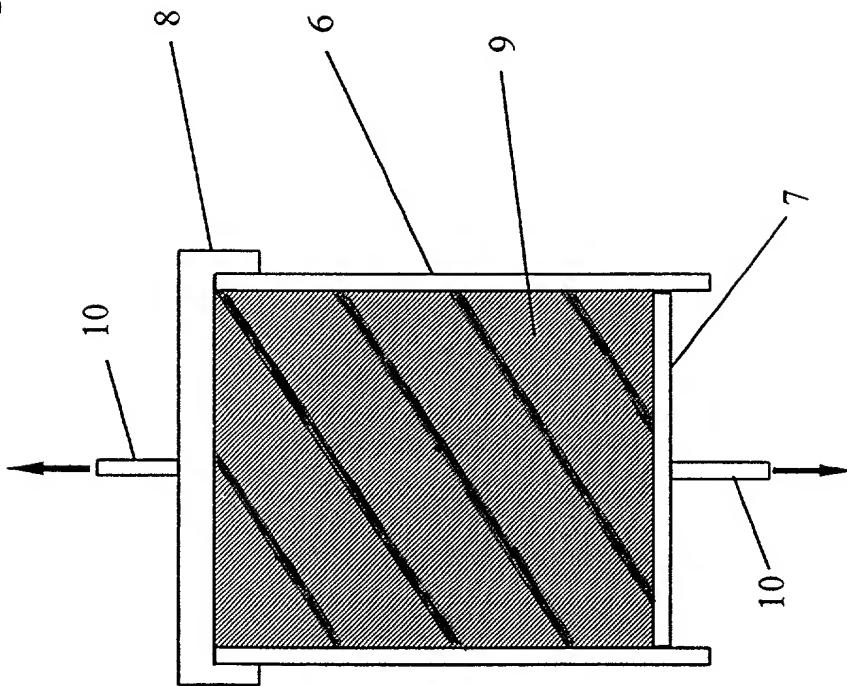
NOTE TO DRAFTSPERSON:
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AND ADD CROSS-HATCHING SHOWN IN RED.

Fig. 2



NOTE TO DRAFTER/PERSON:
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Fig. 3



NOTE TO DRAFTSPERSON:
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AND ADD CROSS-HATCHING SHOWN IN RED.

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For: ELECTRICAL CABLE WITH SELF-)
REPAIRING PROTECTION)

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

**SUPPLEMENTAL PRELIMINARY AMENDMENT AND
REQUEST THAT AN INTERFERENCE BE DECLARED**

Prior to the examination of the above-captioned application, please amend this
application as follows:

IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claim 1, and add new claims 55-73, as
follows:

55. (new) An electrical cable consisting essentially of a conductor, a layer of insulation
around said conductor and a material flowable at about 25° C. between the conductor and the
layer of insulation which provides self-sealing properties to the cable, wherein said material is a
dielectric and has capacity, upon creation of discontinuity in the layer of insulation, of

reestablishing continuity in the layer of insulation in a reversible manner, wherein said material is polyisobutene.

56. (new) The electrical cable of claim 55 wherein said material has a 100 gram needle penetration value greater than 100 tenths of a millimeter at 25° C.

57. (new) The electrical cable of claim 55 wherein the conductor is formed by a plurality of wires stranded together.

58. (new) An electrical cable as set forth in claim 55 having empty spaces formed during or after a cable manufacturing process, but before installing the cable wherein the empty spaces formed prior to installation of the cable, during installation of the cable, and after the cable is placed in service, within said insulation layer and between said insulation layer and the conductor, contain the material which provides the cable with self-sealing properties.

59. (new) A method of making an insulated electrical cable having empty spaces formed during or after a cable manufacturing process, but before installing the cable which mitigates the effects of voids, punctures, or cracks formed in an insulation prior to installation of the cable, during an installation of the cable, and after the cable is placed in service comprising the steps of:

(a) forming a conductor

(b) applying a layer of dielectric material flowable at about 25° C. which provides self-sealing properties on the exterior of the conductor, wherein the material is polyisobutene; and

(c) forming an insulation layer around the conductor.

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60. (new) The method of claim 59 wherein the conductor is formed by a plurality of wires stranded together.

61. (new) The method of claim 60 wherein said material has a 100 gram needle penetration value greater than 100 tenths of a millimeter at 25° C.

62. (new) The method of claim 59 wherein said material flows into voids, punctures, or cracks in the insulation formed prior to the installation of the cable.

63. (new) The method of claim 59 wherein said material flows into space between the conductor and the insulation formed prior to the installation of the cable.

64. (new) The method of claim 59 wherein said material flows into space between the conductor and the insulation formed during the installation of the cable.

65. (new) The method of claim 59 wherein said material flows into voids, punctures, or cracks in the insulation formed during the installation of the cable.

66. (new) The method of claim 59 wherein said material flows into voids, punctures, or cracks in the insulation formed after the cable is placed in service.

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67. (new) The method of claim 59 wherein said material flows into space between the conductor and the insulation formed after the cable is placed in service.

68. (new) The method of claim 59 including applying a water barrier material over the conductor before applying the self-sealing material in step (b).

69. (new) The method of claim 68 wherein the water barrier is a polymer sheet.

70. (new) A method for imparting to a cable comprising a conductor, at least one insulating layer, and a material having a capacity of self-repairing the at least one insulating layer, the method comprising providing the cable with an inner layer comprising said material having the capacity, upon creation of a discontinuity in the at least one insulating layer, of reestablishing a continuity in the at least one insulating layer in a reversible manner, and wherein the material is polyisobutene.

71. (new) The method according to claim 70 wherein the material is capable of at least partially filling the discontinuity without leaking from the cable in an uncontrolled manner.

72. (new) A method of manufacturing a cable having a layer of self-repairing material, which has a capacity, upon creation of a discontinuity in an insulating layer, of reestablishing continuity in the insulating layer in a reversible manner, comprising the steps of:

(a) depositing the self-repairing material, maintained in a fluid state, on a cable core; wherein the self-repairing material is polyisobutene, and

(b) forming the layer of self-repairing material so as to obtain a uniform layer of a predetermined thickness.

73. (new) A method for imparting a self-repairing capacity to a cable, wherein the cable comprises:

a conductor;
at least one insulating layer; and
a material having a capacity of self-repairing the at least one insulating layer;
the method comprising providing the cable with an inner layer comprising a material having the capacity, upon creation of a discontinuity in the at least one insulating layer, of reestablishing a continuity in the at least one insulating layer in a reversible manner, wherein the material is polyisobutene.

REMARKS

I. Preliminary Remarks

Applicants amend this application to copy claims from U.S. Patent No. 6,184,473 ("the '473 patent"), and to request an interference with the '473 patent. The '473 patent is assigned on its face to the Southwire Company, Carrollton, Georgia.

U.S. patent application Serial No. 09/228,482 ("the '482 application") eventually issued as the '473 patent. The '473 patent lists *no* potential U.S. (provisional or nonprovisional) or foreign priority date other than the January 11, 1999, filing date of the '482 application. Thus, the earliest potential effective filing date for the '473 patent is the filing date of the '482 application—January 11, 1999.

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Applicants submit this Supplemental Preliminary Amendment and Request That an Interference Be Declared ("SPA") to fulfill the requirements of 37 C.F.R. §§ 1.604 and 1.607.

Two proposed Forms PTO-850 (Interference Initial Memorandum) accompany this paper to expedite the declaration of an interference. Applicants respectfully request that prompt attention be given to this request for an interference.

II. Status of the Claims

Prior to entry of this SPA, originally-filed claim 1 are pending in the present application.

This SPA cancels claim 1 without prejudice or disclaimer. The subject matter of claim 1, canceled herein, is presented in parent U.S. patent application Serial No. 09/971,766 ("the '766 application"), filed October 9, 2001. Additionally, this SPA adds new claims 55-73.

After entry of this SPA, claims 55-73 are pending in the present application.

A. New Claims 55-73

New claims 55-72 have been copied identically from the '473 patent and correspond, respectively, to claims 1-18 of the '473 patent. New claim 73 is directed to the same subject matter as new claim 70 (and claim 16 of the '473 patent), differing so as to improve the clarity of the claim language. The specification of the present application supports new claims 55-73 as indicated, for example, in the attached Claim Chart (Exhibit A).

Two typographical errors in claims 16 and 17 of the '473 patent are corrected in respective new claims 70 and 71: (1) "polysiobutene" in claim 16 is corrected to recite "polyisobutene" in claim 70; and (2) "filing" in claim 17 is corrected to recite "filling" in claim 71.

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B. Benefit and Right of Priority

The present application is a continuation of the '766 application, filed October 9, 2001, in the name of Sergio BELLI et al. The '766 application is a continuation of U.S. patent application Serial No. 09/261,505 ("the '505 application"), filed March 3, 1999, also in the name of Sergio BELLI et al. The present application claims the benefit under 35 U.S.C. § 120 of both the '766 application and the '505 application.

Additionally, through the '766 application and the '505 application, Applicants claim the benefit under 35 U.S.C. § 119(e) based on prior-filed, copending provisional application No. 60/076,752 ("the '752 provisional application"), filed March 4, 1998, in the U.S. Patent and Trademark Office ("USPTO"). Similarly, through the '766 application and the '505 application, Applicants claim the right of priority under 35 U.S.C. § 119(a) - (d) based on patent application No. 98103767.4 ("the EP application"), filed March 4, 1998, in the European Patent Office.

Accordingly, Applicants submit that the present application is entitled to an effective filing date of no later than March 4, 1998.

III. Request That an Interference Be Declared

An interference should be declared between claims 55-73 of the present application and claims 1-18 of the '473 patent (Exhibit B).

In addition, Applicants believe that at least one patent application is pending in the USPTO that claims the benefit of the '473 patent and that may claim subject matter that interferes with the claims of the present application. This at least one patent application is the following:

U.S. patent application Serial No. 09/756,533 ("the '533 application") (Exhibit C), filed on January 8, 2001, and published as U.S. Patent Application Publication 2001/0001425.

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An interference should be declared between claims 55-73 of the present application and any claims of the '533 application directed to the same patentable invention as claims 55-73 of the present application.

Additionally, an interference should be declared between claims 55-73 of the present application and any pending patent applications that claim the benefit of the '473 patent and contain claims for the same patentable invention as the present application.

An interference is appropriate between an application and an unexpired patent or other application owned by a different party when the application and the patent or other application contain claims for the same patentable invention. 37 C.F.R. § 1.601(i). The test for ascertaining if claims are directed to the same patentable invention is set forth in 37 C.F.R. § 1.601(n) as follows:

Invention "A" is the *same patentable invention* as an invention "B" when invention "A" is the same as (35 U.S.C. 102) or is obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A".

Because claims 55-72 of the present application are identical to claims 1-18 of the '473 patent, and because claim 73 is directed to exactly the same subject matter as claim 70 of the present application and claim 16 of the '473 patent, the claims herein are directed to the "same patentable invention" as the claims of the '473 patent under the test of 37 C.F.R. § 1.601(n). Moreover, because claims 55-73 of the present application are directed to the same patentable invention as the claims of the '473 patent, claims 55-73 are allowable over the prior art for the same reasons that the USPTO found the claims of the '473 patent to be allowable over the prior art.

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New claims 55-72 have been copied identically from the '473 patent. As a result, representative comparisons of the claims of the '473 patent to the claims of the present application are not necessary.

Because Applicants do not have access to the pending claims of the '533 application, no comparisons of the claims of the '533 application to the claims of the present application are possible.

IV. Proposed Count

Applicants seek to provoke one interference between the present application and the '473 patent and between the present application and any pending patent applications that claim the benefit of the '473 patent and contain claims for the same patentable invention as the present application, including the '533 application. Applicants, therefore, propose the following count:

Proposed Count

An apparatus according to claim 55 of the present application

or

A method according to claim 59 of the present application

or

A method according to claim 70 of the present application

or

A method according to claim 72 of the present application

or

A method according to claim 73 of the present application.

A. Alternatives Recited in the Proposed Count

Five alternatives are recited in the proposed count.

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First, an apparatus according to claim 55 of the present application (and claim 1 of the '473 patent). Second, a method according to claim 59 of the present application (and claim 5 of the '473 patent). Third, a method according to claim 70 of the present application (and claim 16 of the '473 patent). Fourth, a method according to claim 72 of the present application (and claim 18 of the '473 patent). Fifth, a method according to claim 73 of the present application.

Applicants note that, in accordance with common practice in the USPTO, the proposed count includes each of the broadest patentable/valid claims of the present application and the '473 patent. Additionally, because of this construction, the proposed count does not encompass unpatentable subject matter.

B. A Single Count is the Correct Approach

The proposed count recites one invention, i.e., an electrical cable and methods for making the electrical cable, for imparting to the electrical cable a capacity of reestablishing continuity, and of manufacturing the electrical cable.

Claim 55 recites an electrical cable consisting essentially of a conductor, a layer of insulation around said conductor and a material flowable at about 25° C. between the conductor and the layer of insulation which provides self-sealing properties to the cable, wherein said material is a dielectric and has capacity, upon creation of discontinuity in the layer of insulation, of reestablishing continuity in the layer of insulation in a reversible manner, wherein said material is polyisobutene.

Claim 59 recites a method of making an insulated electrical cable having empty spaces formed during or after a cable manufacturing process, but before installing the cable which mitigates the effects of voids, punctures, or cracks formed in an insulation prior to installation of

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the cable, during an installation of the cable, and after the cable is placed in service comprising the steps of:

- (a) forming a conductor
- (b) applying a layer of dielectric material flowable at about 25° C. which provides self-sealing properties on the exterior of the conductor, wherein the material is polyisobutene; and
- (c) forming an insulation layer around the conductor.

Claim 70 recites a method for imparting to a cable comprising a conductor, at least one insulating layer, and a material having a capacity of self-repairing the at least one insulating layer, the method comprising providing the cable with an inner layer comprising said material having the capacity, upon creation of a discontinuity in the at least one insulating layer, of reestablishing a continuity in the at least one insulating layer in a reversible manner, and wherein the material is polyisobutene.

Claim 72 recites a method of manufacturing a cable having a layer of self-repairing material, which has a capacity, upon creation of a discontinuity in an insulating layer, of reestablishing continuity in the insulating layer in a reversible manner, comprising the steps of:

- (a) depositing the self-repairing material, maintained in a fluid state, on a cable core; wherein the self-repairing material is polyisobutene, and
- (b) forming the layer of self-repairing material so as to obtain a uniform layer of a predetermined thickness.

Claim 73 recites a method for imparting a self-repairing capacity to a cable, wherein the cable comprises:

- a conductor;
- at least one insulating layer; and

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a material having a capacity of self-repairing the at least one insulating layer;
the method comprising providing the cable with an inner layer comprising a material having the capacity, upon creation of a discontinuity in the at least one insulating layer, of reestablishing a continuity in the at least one insulating layer in a reversible manner, wherein the material is polyisobutene.

1. All Claims of the Present Application and the '473 Patent Correspond to the Proposed Count

Because the proposed count is equal to the broadest patentable/valid claims of the present application and the '473 patent corresponding to the proposed count, stated in the alternative, this construction conveniently allows all claims of the present application and the '473 patent to correspond to the proposed count.

And, for reasons discussed in more detail below, all claims of the present application and the '473 patent do correspond to the proposed count because none of the claims is patentably distinct over the independent claims set forth in the alternative in the proposed count.

2. The Claimed Methods of Making the Cable, for Imparting to the Cable a Capacity of Reestablishing Continuity, and of Manufacturing the Cable Are Not Patentably Distinct from the Cable

The present application and the '473 patent contain both method claims and apparatus claims. By consistently treating all claims of the '473 patent as a single invention during prosecution, the actions of both the applicant and the Examiner indicate that the method claims are not patentably distinct from the apparatus claims.

In particular, the '473 patent issued from the '482 application, in which the Examiner permitted the presence of both apparatus and method claims. During prosecution of the '482 application, the applicant submitted apparatus claims directed to the cable and method claims

directed to a method of making the cable, a method for imparting to the cable a capacity of reestablishing continuity, and a method of manufacturing the cable. In response, the Examiner did not issue a restriction requirement. Instead, the Examiner eventually mailed a Notice of Allowability, indicating that claims directed to the cable, the method of making the cable, the method for imparting to the cable a capacity of reestablishing continuity, and the method of manufacturing the cable would all issue in the same patent.

The Examiner's Statement of Reasons for Allowability confirms that the apparatus claims are not patentably distinct from the method claims. It states: "[t]his invention deals [with an] electrical cable comprising a conductor, a layer of insulation, and a material flowable at about 25°C between the conductor and insulation layer which provides self-sealing properties to the cable wherein the material is polyisobutene (claim 1) and a method of producing an electrical cable having the self-sealing material which is polyisobutene (claims 10, 26, & 28) which is not taught or suggested by the prior art of record." (Notice of Allowability, § 5, p. 4). The applicant did not contest the Examiner's characterization of all eighteen claims in the singular as "[t]his invention."

Thus, the actions of both the applicant and the Examiner indicate that the claimed methods are not patentably distinct from the claimed cable.

**3. Additional Limitations in the Claims of the '473 Patent
Do Not Make Those Claims Patentably Distinct**

Additional claim limitations in the dependent claims of the present application and the '473 patent include: (1) "the conductor is formed by a plurality of wires stranded together"; (2) "applying a water barrier material over the conductor before applying the self-sealing material in step (b)"; (3) "the water barrier is a polymer sheet"; (4) "said material has a 100 gram

needle penetration value greater than 100 tenths of a millimeter at 25° C”; and (5) “the material is capable of at least partially [filling] the discontinuity without leaking from the cable in an uncontrolled manner.”

However, forming a conductor as a plurality of wires stranded together, applying a water barrier material to a conductor before applying further coating layers, and the use of a polymer sheet as such a water barrier are well known in the art. Also, it is known in the art that polyisobutene may have a 100 gram needle penetration value greater than 100 tenths of a millimeter at 25°C (see, e.g., U.S. Patent No. 5,010,209 and Exhibit K). Further, if the material has capacity, upon creation of discontinuity in the layer of insulation, of reestablishing continuity in the layer of insulation in a reversible manner, then the material must be capable of at least partially filling the discontinuity without leaking from the cable in an uncontrolled manner.

Finally, Applicants note that claim 59 of the present application (and claim 5 of the '473 patent) recite “empty spaces formed during or after a cable manufacturing process.”

Similarly, claim 59 of the present application (and claim 5 of the '473 patent) recite “voids, punctures, or cracks formed in an insulation.” Further, claim 59 of the present application (and claim 5 of the '473 patent) recite “prior to installation of the cable, during an installation of the cable, and after the cable is placed in service.”

Applicants submit that the various combinations of these recitations in the dependent claims would have been obvious to one skilled in the art if the proposed count were considered prior art.

Additionally, analogous to the discussion in Section IV.B.2 above, by consistently treating all claims of the '473 patent as a single invention during prosecution, the actions of both

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the applicant and the Examiner indicate that the dependent claims are not patentably distinct from the independent claims.

V. All of the Claims of the '473 patent and the Claims of the Present Application Should Be Designated as Corresponding to the Count

All claims of the present application and the '473 patent are directed to subject matter that is patentably indistinct from each other and the proposed count, and should be designated as corresponding to the count. The claims of the present application and the '473 patent represent common, interfering subject matter, and the proposed count embraces that subject matter.

As further explained above, the variations in the claims of the '473 patent do not represent patentably distinct departures from the limitations in the proposed count. Accordingly, all claims of the '473 patent that have been identified herein should be designated as corresponding to the count.

Also, Applicants have identified above the '533 application that could reasonably be expected to contain additional patentably indistinct claims that should appropriately be designated as corresponding to the count.

VI. The Benefit of Earlier U.S. Applications Should Be Accorded to Applicants When Declaring an Interference

Benefit for interference purposes can be found in any prior application in which one embodiment of the count is described in a manner that complies with 35 U.S.C. § 112. In the present application, Applicants claim the benefit of two U.S. patent applications and one U.S. provisional patent application, and claim the right of priority of a European patent application.

The present application is a continuation of the '766 application, filed October 9, 2001 (Exhibit D). The '766 application is a continuation of the '505 application, filed March 3, 1999 (Exhibit E, abandoned). Through the '766 application and the '505 application, Applicants claim

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the benefit of the '752 provisional application, filed March 4, 1998 (Exhibits F/G, abandoned). Additionally, through the '766 application and the '505 application, Applicants claim the right of priority of the EP application, also filed March 4, 1998 (Exhibits H/I).

Support may be found in each of these antecedent priority applications for exemplary embodiments meeting all the limitations of the proposed count.

A. Exemplary Disclosures

Applicants note that the originally-filed specification, claims, abstract, and drawings of the present application, the '766 application, the '505 application, and the '752 provisional application are substantially identical.

Additionally, the originally-filed specification, claims, abstract, and drawings of the present application are also substantially identical to the originally-filed EP application.

Attached hereto is a Claim Chart (Exhibit A) that provides exemplary disclosures for the present application, the '766 application, the '505 application, the '752 provisional application, and the EP application.

B. Applicants Should Be Declared the Senior Party

The earliest U.S. application from which the present application claims benefit is the '752 provisional application (Exhibit F), filed March 4, 1998. An English-language translation of the '752 provisional application is attached (Exhibit G).

As shown in the Claim Chart, the '752 provisional application discloses an electrical cable consisting essentially of a conductor, a layer of insulation around said conductor and a material flowable at about 25°C between the conductor and the layer of insulation which provides self-sealing properties to the cable, wherein said material is a dielectric and has capacity, upon creation of discontinuity in the layer of insulation, of reestablishing continuity in

the layer of insulation in a reversible manner, wherein said material is polyisobutene. (The '752 provisional application, p. 3/11. 34-36; p. 4/11. 1-2, 12-14, and 25-33; p. 6/11. 4-6; p. 8/11. 4-7; and p. 10/1. 36 - p. 11/1. 3).

Similarly, the '752 provisional application discloses a method of making an insulated electrical cable having empty spaces formed during or after a cable manufacturing process, but before installing the cable which mitigates the effects of voids, punctures, or cracks formed in an insulation prior to installation of the cable, during an installation of the cable, and after the cable is placed in service comprising the steps of:

- (a) forming a conductor
- (b) applying a layer of dielectric material flowable at about 25°C which provides self-sealing properties on the exterior of the conductor, wherein the material is polyisobutene; and
- (c) forming an insulation layer around the conductor. (Id., p. 1/11. 16-21; p. 2/11. 35-39; p. 3/11. 13-29 and 34-36; p. 4/11. 12-14 and 30-33; p. 6/11. 4-6; and p. 10/1. 36-p. 11/1. 5).

The '752 provisional application additionally discloses a method for imparting to a cable comprising a conductor, at least one insulating layer, and a material having a capacity of self-repairing the at least one insulating layer, the method comprising providing the cable with an inner layer comprising said material having the capacity, upon creation of a discontinuity in the at least one insulating layer, of reestablishing a continuity in the at least one insulating layer in a reversible manner, and wherein the material is polyisobutene. (Id., p. 4/11. 7-9, 15-17, and 20-29; p. 10/1. 36-p. 11/1. 3; and originally-filed claim 50).

And, the '752 provisional application discloses a method of manufacturing a cable having a layer of self-repairing material, which has a capacity, upon creation of a discontinuity in an

insulating layer, of reestablishing continuity in the insulating layer in a reversible manner, comprising the steps of:

(a) depositing the self-repairing material, maintained in a fluid state, on a cable core; wherein the self-repairing material is polyisobutene, and

(b) forming the layer of self-repairing material so as to obtain a uniform layer of a predetermined thickness. (Id., p. 4/l. 7-9, 15-17, and 25-33; p. 10/l. 36-p. 11/l. 3; p. 18/l. 9-11 and 13-17; and originally-filed claim 52).

Further, the '752 provisional application discloses a method for imparting a self-repairing capacity to a cable, wherein the cable comprises:

a conductor;

at least one insulating layer; and

a material having a capacity of self-repairing the at least one insulating layer;

the method comprising providing the cable with an inner layer comprising a material having the capacity, upon creation of a discontinuity in the at least one insulating layer, of reestablishing a continuity in the at least one insulating layer in a reversible manner, wherein the material is polyisobutene. (Id., p. 4/l. 7-9, 15-17, and 20-29; p. 10/l. 36-p. 11/l. 3; and originally-filed claim 50).

Finally, the '752 provisional application discloses both forming a conductor as a plurality of wires stranded together (id., p. 16/l. 35-37) and applying a water barrier material to a conductor before applying the self-sealing material (Example 6, pp. 24-30 and Example 7, pp. 30-31). And, the use of a polymer sheet as such a water barrier is well known in the art.

Also, in addition to the fact that it is known in the art that polyisobutene may have a 100 gram needle penetration value greater than 100 tenths of a millimeter at 25°C (see, e.g., U.S. Patent

No. 5,010,209 and Exhibit K), the '752 provisional application discloses at least one polyisobutene that, under a comparable penetration test, produces a penetration result within the claimed range (the '752 provisional application, p. 11/l. 2). Further, the '752 provisional application discloses that the self-repairing material is capable of at least partially filling the discontinuity without leaking from the cable in an uncontrolled manner (*id.*, p. 3/l. 34-39 and originally-filed claim 51).

Therefore, the '752 provisional application provides an effective filing date of no later than March 4, 1998.

Additionally, the present application claims the right of priority based on the EP application (Exhibit H), also filed March 4, 1998. An English-language translation of the EP application is attached (Exhibit I).

Because the originally-filed specification, claims, abstract, and drawings of the present application are also substantially identical to the originally-filed EP application, the EP application provides an independent basis for an effective filing date of no later than March 4, 1998.

The continuous chain of the '752 provisional application (Exhibits F/G), filed March 4, 1998, and/or the EP application (Exhibits H/I), also filed March 4, 1998; the '505 application (Exhibit E), filed March 3, 1999; the '766 application (Exhibit D), filed October 9, 2001; and the present application demonstrate that the present application is entitled to an effective filing date of no later than March 4, 1998. In contrast, the '473 patent lists *no* potential U.S. (provisional or nonprovisional) or foreign priority date other than the January 11, 1999, filing date of the '482 application. Further, the prosecution history file of the '473 patent indicates: (1) "Continuing

Domestic Data"—"Verified None"; (2) "371 (Nat'l Stage) Data"—"Verified None";
(3) "Foreign Applications"—"Verified None"; and (4) "Foreign Priority claimed"—"No".

Thus, the earliest potential effective filing date for the '473 patent is the filing date of the '482 application—January 11, 1999.

Similarly, the earliest potential effective filing date for the '533 application is January 11, 1999, as the '533 application apparently claims the benefit of only the '473 patent.

Accordingly, Applicants are entitled to senior party status.

Lastly, because Applicants' effective U.S. filing date is before the earliest effective U.S. filing date of the '473 patent, no showing pursuant to 37 C.F.R. § 1.608 is required.

VII. The Requirements of 35 U.S.C. § 135(b) Are Satisfied

Applicants claimed the same or substantially the same subject matter as the claims of the '473 patent less than one year after the '473 patent issued.

In particular, claims 55-73 of the present application are drawn to substantially the same subject matter as the claims of the '473 patent, which issued less than one year ago on February 6, 2001.

Additionally, Applicants may claim the same or substantially the same subject matter as the claims of the '533 application less than one year after the '533 application was published.

In particular, claims 55-73 of the present application may be drawn to substantially the same subject matter as the claims of the '533 application, which was published less than one year ago on May 24, 2001.

VIII. Conclusion

In light of the above, Applicants respectfully submit that the pending claims in the present application are directed to allowable subject matter that is patentably indistinct from the

claims of the '473 patent and, potentially, the claims of the pending '533 application as well.

Applicants therefore request an interference based on the count proposed in this SPA.

Accordingly, Applicants request that the Examiner:

- (1) prepare and transmit the Forms PTO-850 (Interference Initial Memorandum) (proposed samples enclosed as Exhibit K) recommending that an Administrative Patent Judge institute an interference between the present application and the '473 patent, and between the present application and any pending patent applications that claim the benefit of the '473 patent and contain claims for the same patentable invention as the present application, including the '533 application;
- (2) propose the count set forth in this SPA and designate claims 55-73 of the present application and claims 1-18 of the '473 patent as corresponding to the count, as well as the relevant claims of the '533 application and any other related pending applications;
- (3) accord Applicants the benefit of each earlier-filed U.S. provisional patent application and patent application (Exhibits F/G, E, and D) and the right of priority of the earlier-filed European patent application (Exhibits H/I); and
- (4) designate Applicants as the Senior Party when the interference is declared.

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If there is any fee due in connection with the filing of this SPA, please charge the fee to
our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
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Dated: January 29, 2002

By: _____
Lawrence F. Galvin
Reg. No. 44,694

Attachments (Exhibits A-K)

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